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Advancing NDE Education for Future Engineers – A South African Perspective

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Non-Destructive Evaluation has gained vast popularity in industry due to its effectiveness in the inspection of engineering structures. To date, a lot of advances to train NDE technicians have been achieved, with the objective to instill the understanding of basic principles of NDE methods and the practical application of such methods. The testing of structures is classically performed according to design codes such as American Society of Mechanical Engineers –V (ASME-V), American Society for Testing and Materials (ASTM), British Standard 3923 (BS 3923) and others. For performing in-service inspection, there is no existing design code. This calls for a need to highly advance NDE engineering education. There is also a need to design NDT systems. To develop reliable systems, technical justifications will be required, and can be achieved through modelling capabilities. It is therefore significant to develop a thorough understanding of the NDE system and qualifications based on correct inputs from allied sciences, and also develop modelling capabilities at engineering level for an integrated approach to NDE. The use of university education at undergraduate and postgraduate levels to help facilitate NDE education should be promoted.